AMENDMENTS TO THE CLAIMS

1. (cancelled) A method of treating a patient suffering from or at risk of suffering from loss of cardiac function by cardiac ischemia, comprising

(a) imaging the patient's heart, or a portion thereof, to identify (i) an underperfused region of cardiac muscle, (ii) a source of oxygenated blood that is proximate a boundary of the underperfused region, and (iii) a target area that includes said underperfused region boundary and a tissue expanse laying between said oxygenated blood supply and said boundary;

(b) at each of a plurality of sites throughout the target area, introducing a stimulus effective to simulate angiogenesis in myocardial tissue and form a capillary network from the oxygenated blood supply to the underperfused region;

(c) following said introducing step (b), equipping the patient with an exercise monitor that indicates the level and amount of heart exercise the patient achieves; and

(d) requiring the patient to achieve an amount and level of heart exercise effective to stimulate the conversion of capillary blush produced by said step (b) to arterioles in the target area.

2. (cancelled) The method of claim 1, wherein the exercise takes place over a period of at least 4-5 weeks after said introducing step.

3. (cancelled) The method of claim 1, wherein the stimulus is a growth factor selected from the group consisting of fibroblast growth factor-1 (FGF-1), vascular endothelial growth factor (VEGF), platelet-derived growth factor (PDGF), insulin-like growth factor-1 (IGF-1), and combinations of two or more of these growth factors.

4. (cancelled) The method of claim 1, wherein the stimulus is an injury produced by a stimulus selected from the group consisting of a mechanical, laser, chemical, thermal, or ultrasonic stimulus.

5. (cancelled) The method of claim 1, wherein said exercise monitor is designed to monitor patient heart rate and to calculate the duration of exercise during which the patient's heart rate is above a selected threshold, as an indication of cardiovascular challenge.

6. (cancelled) The method of claim 5, wherein said monitor stores cardiovascular challenge data for every day of use, and estimates the number of days needed to induce transformation of capillary blush produced by step (b) into arterioles.

7. (cancelled) The method of claim 1, further comprising
pacing the heart with a pacemaker to achieve the amount and level of heart exercise.

8. (previously withdrawn) A monitor adapted to be worn by a patient after a surgical procedure designed to (i) identify heart regions in need of enhanced vascularization, and (ii) include capillary blush in such regions, said monitor comprising
(a) a sensor for monitoring patient heart rate;
(b) a processor for calculating (i) the total time that the patient's heart rate is above a selected level, and (ii) the total number of days needed to induce transformation of the capillary blush into arterioles, based on the level of exercise being monitored; and
(c) a display device for displaying information calculated by the processor.

9. (previously withdrawn) The method of claim 1, wherein the equipping step is carried out within approximately 1-5 days following said introducing step (b).

10. (new) A method of inducing transformation of capillary blush into arterioles in a patient after a surgical procedure, comprising the steps of:
(a) providing a monitor having a sensor for measuring the patient's heart rate, and a processor;
(b) equipping the patient with the monitor;
(c) using the sensor to measure the patient's resting heart rate;
(d) elevating the patient's heart rate to a selected threshold by having the patient undergo exercise;
(e) using the sensor to detect when the patient's heart rate has reached the selected threshold;
(f) determining the duration of time that the patient's heart rate was above the selected threshold during exercise; and
(g) using the processor to estimate an amount of time of exercise needed to induce transformation of capillary blush into arterioles based on the selected heart rate threshold and the duration of time determined in step (f).

11. (new) The method of claim 10, wherein the monitor further comprises a display device, and wherein the method further comprises the step of displaying the duration of time determined in step (f).

12. (new) The method of claim 11, wherein the method further comprises displaying the amount of time of exercise needed to reach a desired level of capillary blush into arterioles.

13. (new) The method of claim 10, wherein the monitor further comprises a storage device, and wherein the method further comprises storing the resting heart rate measured in step (c).

14. (new) The method of claim 13, wherein the method further comprises storing the duration of time determined in step (f).

15. (new) The method of claim 10, wherein the monitor is configured to alert the patient that a selected heart rate threshold has been reached.

16. (new) The method of claim 10, wherein the storage device maintains data on the dates upon which heart-rate exercise was measured, the integrated elevated heart rate/duration value of each exercise date, and the total dates remaining in an exercise regimen.

17. (new) The method of claim 10, wherein the monitor is configured to send an signal to the patient to initiate an exercise program.

18. (new) The method of claim 10, wherein the monitor is adapted to be strapped to the patient.

19. (new) The method of claim 10, wherein the sensor comprises at least one electrode.

20. (new) The method of claim 10, wherein the selected heart rate threshold is about 50 to about 100 percent of the patient's resting heart rate.

21. (new) The method of claim 10, wherein exercise is performed on a daily basis, for at least about one-half hour per day.

22. (new) The method of claim 21, wherein the exercise is performed on a daily basis for about 10 weeks.

23. (new) The method of claim 10, wherein a pacemaker is utilize to stimulate the patient's heart.